

## MISCELLANEOUS NOTES

### REFERENCES

- ALI, S. AND RIPLEY, S. D. (1974): Handbook of the Birds of India and Pakistan, Vol. 10. Oxford University Press: Bombay.
- DEMENTIEV, G. P. AND GLADKOV, N. A. (Eds.) (1954): Birds of the Soviet Union, Vol. 5. Translated by Israel Program for Scientific Translations: Jerusalem 1970.
- FLEMING, R. L., SR., FLEMING, R. L., JR., AND BANGDEL, L. S. (1975): Field Guide to the Birds of Nepal. Avalok Publishers: Kathmandu.
- KING, B. F., DICKINSON, E. C. AND WOODCOCK, M. W. (1975): A Field Guide to the Birds of South-East Asia. Collins: London.
- REEB, F. (1977): Contribution a l'étude de l'avifaune et des migrations en Afghanistan. *Alauda* 45: 293-333.

### 18. JUVENILE BULL FROGS (*RANA TIGERINA*) FEEDING ON FLIES ON RESTING BUFFALOES

On 23rd August 1980 at 9 a.m., on my way to University, I saw a buffalo lying in a puddle of water with about six small frogs on its back vigorously engaged in jumping and catching the flies that disturbed the buffalo. I could spend only a few minutes to observe this incident but I noticed that as and when the frogs jumped and caught the flies, the buffalo also got restless probably due to irritating sensation on its skin. I could not collect the flies to identify them but I believe they are

either the common house fly or some related species. Again on 25th September 1980, I saw 3 buffaloes lying in a puddle in front of the University Examination wing with small frogs on their back catching flies. A frog collected from the puddle has been identified as *Rana tigerina*. I have not read of this type of behaviour, and I think that both the buffaloes and the frogs mutually benefitted from this association.

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### 19. EGG-LAYING AND NEST-GUARDING BEHAVIOUR OF ESTUARINE CROCODILE (*CROCODYLUS POROSUS*, SCHNEIDER) IN CAPTIVITY

The present communication deals with egg-laying and nest-guarding behaviour observed in an estuarine crocodile (*Crocodylus porosus*) at the Nandankanan Biological Park, Orissa, India.

The female estuarine crocodile laid eggs for the first time when she attained a length of 255 cm and at an estimated age of ten years.

The number of eggs laid in four clutches was 29, 34, 35 and 34 eggs.

The nest-guarding behaviour in the crocodile was observed for a period of 2½ months, corresponding with the period of incubation.

In India, the estuarine or saltwater crocodile (*Crocodylus porosus*) is known to occur in the tidal mangrove forests of Sunderbans